

Date: Wednesday, 9/26/2007 7:56:07 AM
User: Kim Johnston

Process Sheet

split

Customer : CU-DAR001 Dart Helicopters Services	Drawing Name : SADDLE BILLET
Job Number : 34875-3	
Estimate Number : 10035	
P.O. Number : N/A	Part Number : D6101007
This Issue : 9/26/2007 S.O. No. : N/A	Drawing Number : D6101 REV A
Prsht Rev. : NC	Project Number : N/A
First Issue : N/A Type : MACHINED PARTS	Drawing Revision : A
Previous Run : 31389	Material : N/A
Written By : <i>[Signature]</i>	Due Date : 10/26/2007 Qty: 300 Um: Each
Checked & Approved By : <i>[Signature]</i>	
Comment : Est. A. 01.05.04 New Issue EC	

Additional Product

Job Number:



Seq. #: Machine Or Operation: Description :

1.0 PG PURCHASING



Comment: PURCHASING

Issue P/O: *4685*

a) Description: Alluminum billet

b) 7.750" x 8.250" x 2.50" thick

c) Tolerance on all dimensions are +0.030"/-0.000"

d) Grain direction along 7.750" length

e) Material: 7075-T7351 (QQ-A-250/12)

f) Material certification required

c 207/09/26

(300)

2.0 D6101007P 7075-T7351 8.25X7.75X2.5



Comment: Qty.: 1.0000 Each(s)/Unit Total : 300.0000 Each(s)
7075-T7351 8.25X7.75X2.5

3.0 PACKAGING 1 PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Receive & Inspect For Transit Damage

Ensure material certification is attached

c 8/1/08 (100)

4.0 QC6 DIMENSIONAL CHECK



Comment: DIMENSIONAL CHECK

Ensure Material certification comply to Dwg D6101

22/01/11 (100)
28 08/01/09 (100)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes ☐ No ☒ DQA: JD Date: 08/10/11
 QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Wednesday, 9/26/2007 7:56:08 AM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SADDLE BILLET

Job Number: 34875

Part Number: D6101007

Job Number:



Seq. #:

Machine Or Operation:

Description :

5.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location:

Machining

SF 08/01/09

6.0

QC21

FINAL INSPECTION/W/O RELEASE



(100)

Comment: FINAL INSPECTION/W/O RELEASE

2008/11/10

Job Completion



2008/11/10 (100X)

U

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

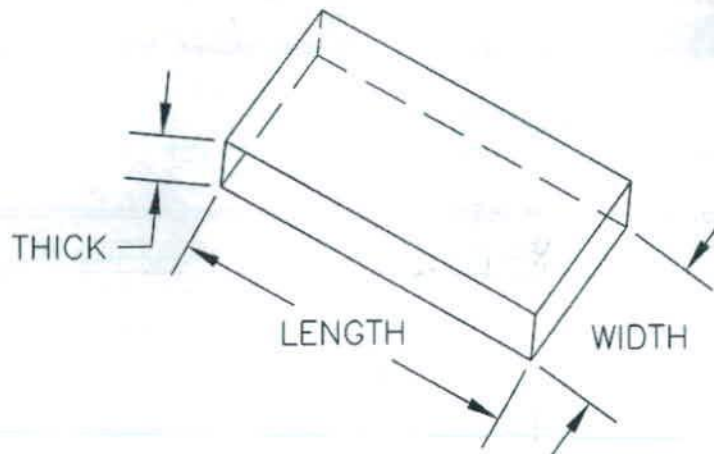
NOTE: Date & initial all entries



DESIGN <i>CP</i>	DRAWN BY <i>CP</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>#</i>	APPROVED <i>AS</i>	DRAWING NO. D6101	Rev. A SHEET 1 OF 1
DATE 01.03.30		TITLE SADDLE BILLET, 7075	SCALE NTS
A	01.03.30	NEW ISSUE	

SPECIFICATION CONTROL DRAWING

RELEASED
01.04.23 *CP*



PURCHASE MATERIAL ACCORDING TO THE FOLLOWING TABLE. SPECIFY ALLOY, LENGTH X WIDTH X THICK (+0.030/-0.000), AND GRAIN DIRECTION AS SHOWN.

TOLERANCES ON ALL DIMENSIONS ARE +0.030/-0.000.

ALL DIMENSIONS ARE IN INCHES.

STOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 34875

Part No.	Alloy	Length	Width	Thick	Grain Direction
D6101-001	7075-T7351 (QQ-A-250/12)	6.000	6.250	2.000	Along 6.000 Length
D6101-003	7075-T7351 (QQ-A-250/12)	7.875	6.250	2.000	Along 7.875 Length
D6101-005	7075-T7351 (QQ-A-250/12)	5.000	8.250	2.500	Along 5.000 Length
D6101-007	7075-T7351 (QQ-A-250/12)	7.750	8.250	2.500	Along 7.750 Length
D6101-009	7075-T7351 (QQ-A-250/12)	8.700	8.250	2.500	Along 8.700 Length
D6101-011	7075-T7351 (QQ-A-250/12)	9.700	8.250	2.500	Along 9.700 Length
D6101-013	7075-T7351 (QQ-A-250/12)	10.100	8.250	2.500	Along 10.10 Length

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31 557530 424882 01



A.M. CASTLE & Co. (Canada) Inc.

EXPÉDIE 04 JAN. 2008

O. REQUISITION CLIENT-CUSTOMER REQUISITION NO.		NO. COM. CLIENT-CUST. ORD. NO.		COMPTÉ-ACCT.	VEND. SLS	TERR.	EXPÉDIE PAR-SHIP VIA	
		4685		91037	200	40	TRUCK MONTREAL	
CHETEUR-PURCHASING AGENT		TELEPHONE	H/C	TAXE	NO. COM ORD	REGION LIVRAISON-DEL ZONE		F.A.B.-F.O.B.
LINDA LACELLE		613 632-3336	9	0	1	C/C		PREPAID
IVRE A-SHIP TO:		VENDU A-SOLD TO:				INFORMATION CRÉDIT-CREDIT INFORMATION		ROUTE
		DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY ON K6A 1K7				REC SEE FRANCE STATUS		01*NL-10/1 31-NL-01/3
INSTRUCTIONS/LIVRAISON-DELIVERY		INSTRUCTIONS LIVRAISON (CONT.)-DELIVERY (CONT'D.)				INSTRUCTIONS LIVRAISON (CONT.)-DELIVERY (CONT'D.)		
ING-H60156								

DESCRIPTION - ITEM 1		QTE/UNITE COM.-ORDERED		POIDS COM.-WT. ORDERED
2.5mm PLATE 7075-T7351 ALUM 8.25" X 7.75"		100 PCS PCS		1615
BLACK-W/RED STRIPE		BALLOTS-BUNDLES		POIDS EXP.-WT. SHIPPED
		2 100		1615
CERTIFICATE OF CONFORMANCE		COULÉE INFO-HEAT INFO		QTE-QTY
A.M. Castle & Co. certifies that the material(s) supplied under this document will meet and conform to the specifications of the product(s) described hereon. A.M. Castle & Co. (Canada) Inc.		405629 A7		40
INSTRUCTIONS		409618 A6		40
TOL: +.025"/-.000" THICKNESS TOL.: +.030"/-.000" GRAIN TO RUN ALONG 7.75" ATTN MARTINE: NE PAS EXPEDIER PRIOR DIST/ORD: 01 424882		FORME-SHAPE		I.A.C.
WEIGHT FOR SHIPPING PURPOSES ONLY. SEE INVOICES FOR ACCURATE BILLING WEIGHT. PLEASE SIGN AND DATE DRIVER'S COPY FOR RECEIPT OF MATERIAL AND, IF CHECKED, TEST REPORTS.		36.360 SQF		6879
		ENT-V		

DESCRIPTION - ITEM 2		QTE/UNITE COM.-ORDERED		POIDS COM.-WT. ORDERED
INSTRUCTIONS		COULÉE INFO-HEAT INFO		QTE-QTY
TERMS AND CONDITIONS OF SALE				
SEE DISCLAIMERS AND LIMITATIONS ON THE REVERSE SIDE		INSTRUCTIONS (CONT'D.)		ENT-V

DESCRIPTION - ITEM 3		QTE/UNITE COM.-ORDERED		POIDS COM.-WT. ORDERED
INSTRUCTIONS		COULÉE INFO-HEAT INFO		QTE-QTY
ALL EXCEPTIONS FOR SHORTAGE OR DAMAGE MUST BE NOTED ON THE DRIVER COPY & CUSTOMER COPY OF THE DELIVERY RECEIPTS & SIGNED BY THE DRIVER & CUSTOMER. COPY OF SUCH RECEIPT PROPERLY NOTED MUST BE SUBMITTED WITHIN 10 DAYS WHEN CREDIT IS REQUESTED.				
NOM (LETTRE MOULEE)-NAME (PRINT ONLY)		INSTRUCTIONS (CONT'D.)		ENT-V
RECU PAR-RECEIVED BY				
DATE RECU-DATE RECEIVED				

FEVILLE D'EMBALLAGE - PACKING SLIP

SHIP TO: A M CASTLE & CO 3400 NO. WOLF ROAD FRANKLIN PARK, IL 60131
SOLD TO: AM CASTLE & CO 3400 NO. WOLF ROAD FRANKLIN PARK, IL 60131

**KAISER
ALUMINUM**
Trentwood Works - Spokane, WA 99215
Phone: (800) 367-2586

CERTIFIED TEST REPORT

Serial Number
4103569

CUSTOMER PO NUMBER: 01-84658		WORK PACKAGE:		CUSTOMER PART NUMBER: 6879 A97075-60		SHIP RUN/LOAD ID: 101025/16		GOV'T CONTRACT NUMBER:	
KAISER ORDER NO: 1052032	LINE ITEM: 1	SHIP DATE: 26-JUL-2007	ALLOY: 7075	CLAD: BARE	TEMPER: T7351	PRODUCT DESCRIPTION: MILL FINISH PLATE			
WEIGHT SHIPPED: 7126 LB	QUANTITY: 4 PCS EST.	B/L NUMBER: 2013762	GAUGE: 2.5000 IN		WIDTH: 48.500 IN	LENGTH: 144.500 IN			

Certified Specifications

AMS 4078/RevG
ASTM B 209/Rev06
BSS 7055/RevA
DPS 4.713/RevN/AmdAF
GSS16100/RevG

AMS-QQ-A-250/12
ASTM B 594/Rev06
CMMP 025/RevR
EAC MS1011/RevD
MMS 159/RevN

AMS-STD-2154
BAC 5439/RevH
CSTI 006/RevC
GAMPS 9101/RevB
PS 21211/RevK

Test Code: 4297**Test Results**

Lot: 401533A5 Cast 984

Drop 61

Ingot 2

(ASTM E8/B557)

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T7351	LT / 2 (Min:Max)	70.1 : 70.1 (483 : 483)	58.8 : 59.1 (405 : 407)	10.8 : 11.0

(ASTM E1004)
Conductivity %IACS : 41.0 Min 41.1 Max
(MS/M) : 23.8 Min 23.8 Max

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual	0.11	0.21	1.5	0.02	2.5	0.20	5.7	0.03	0.01	0.01	TOT 0.04

CASTLE METALS CORP.
DATE RCVD 7/36/12
IAC 6879
APPROVED BY flw-2

**KAISER
ALUMINUM**Trentwood Works - Spokane, WA 99215
Phone: (800) 367-2586**CERTIFIED TEST REPORT**Serial Number
4103569

Lot: 405629A7 Cast 984 Drop 87 Ingot 3

(ASTM E8/B557)

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T7351	LT / 2 (Min:Max)	70.3 : 70.6 (485 : 487)	59.1 : 59.1 (407 : 407)	10.4 : 10.9

(ASTM E1004)	
Conductivity %IACS :	41.6 Min
(MS/M) :	24.1 Min
	41.8 Max
	24.2 Max

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER	
Actual	0.11	0.20	1.5	0.02	2.5	0.19	5.6	0.02	0.01	0.01	TOT	0.03

ALLOY LIMITS

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER	MAX
7075 MIN	0.00	0.00	1.2	0.00	2.1	0.18	5.1	0.00	0.00	0.00	EACH	0.05
MAX	0.40	0.50	2.0	0.30	2.9	0.28	6.1	0.20	0.05	0.05	TOT	0.15

Aluminum Remainder

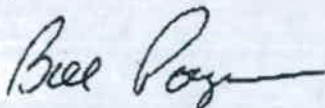
TEST NOTES

Metal represented by this test report was immersion ultrasonically tested from one side and meets the Class A and Class B requirements of all specifications referenced on this test report.

CERTIFICATION

KAISER ALUMINUM & CHEMICAL CORPORATION (KAISER) HEREBY CERTIFIES THAT METAL SHIPPED UNDER THIS ORDER WAS MELTED AND MANUFACTURED IN THE U.S.A. AND HAS BEEN INSPECTED, TESTED, AND FOUND IN CONFORMANCE WITH THE REQUIREMENTS OF THE APPLICABLE SPECIFICATIONS AS INDICATED HEREIN. ALL METAL WHICH IS SOLUTION HEAT-TREATED COMPLIES WITH AMS 2772. ANY WARRANTY IS LIMITED TO THAT SHOWN ON KAISER'S STANDARD GENERAL TERMS AND CONDITIONS OF SALE. TEST REPORTS ARE ON FILE, SUBJECT TO EXAMINATION. TEST REPORTS SHALL NOT BE REPRODUCED EXCEPT IN FULL, WITHOUT THE WRITTEN APPROVAL OF KAISER ALUMINUM & CHEMICAL CORPORATION LABORATORY. THE RECORDING OF FALSE, FICTITIOUS, OR FRAUDULANT STATEMENTS OR ENTRIES ON THE CERTIFICATE MAY BE PUNISHED AS A FELONY UNDER FEDERAL LAW. ISO-9001:2000 CERTIFIED

BILL POYNOR, LABORATORIES SUPERVISOR



SHIP TO:
A M CASTLE & CO
3400 NO. WOLF ROAD
FRANKLIN PARK, IL 60131

**KAISER
ALUMINUM**

Trentwood Works - Spokane, WA 99215
Phone: (800) 367-2586

CERTIFIED TEST REPORT

Serial Number
4106118

SOLD TO:
AM CASTLE & CO
3400 NO. WOLF ROAD
FRANKLIN PARK, IL 60131

CUSTOMER PO NUMBER: 01-35054		WORK PACKAGE:		CUSTOMER PART NUMBER: 6879 A97075-60		SHIP RUN/LOAD ID: 101051/6	GOV'T CONTRACT NUMBER:
KAISER ORDER NO: 1054197	LINE ITEM: 1	SHIP DATE: 23-AUG-2007	ALLOY: 7075	CLAD: BARE	TEMPER: T7351	PRODUCT DESCRIPTION: MILL FINISH PLATE	
WEIGHT SHIPPED: 7154 LB	QUANTITY: 4 PCS EST.	B/L NUMBER: 2014128	GAUGE: 2.5000 IN	WIDTH: 48.500 IN	LENGTH: 144.500 IN		

Certified Specifications

AMS 4078/RevG
ASTM B 209/Rev06
BSS 7055/RevA
DPS 4.713/RevN/AmdAF
GSS18100/RevG

AMS-QQ-A-250/12
ASTM B 594/Rev06
CMMP 025/RevR
EAC MS1011/RevE
MMS 159/RevN

AMS-STD-2154
BAC 5439/RevH
CSTI 006/RevC
GAMPS 9101/RevB
PS 21211/RevK

Test Code: 4297

Test Results

Lot: 409415A7 Cast 993 Drop 15 Ingot 3

(ASTM E8/B557)

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T7351	LT / 2 (Min:Max)	71.6 : 71.8 (494 : 495)	60.6 : 60.9 (418 : 420)	11.8 : 11.9

(ASTM E1004)

Conductivity %IACS :	41.4 Min	41.9 Max
(MS/M) :	24.0 Min	24.3 Max

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual	0.11	0.19	1.4	0.04	2.5	0.21	5.6	0.02	0.01	0.01	TOT 0.03

CASTLE METALS CORP.
DATE RCVD 8/28/07
IAC 6879
APPROVED BY *[Signature]*

KAISER ALUMINUM

CERTIFIED TEST REPORT

Serial Number

4106118

Trentwood Works - Spokane, WA 99215
Phone: (800) 367-2586

Lot: 409518A6 Cast 993 Drop 05 Ingot 2

(ASTM E8/B557)

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T7351	LT / 2 (Min:Max)	70.7 : 70.9 (487 : 489)	59.2 : 59.9 (408 : 413)	11.0 : 11.4

(ASTM E1004)

Conductivity %IACS :	41.6 Min	42.3 Max
(MS/M) :	24.1 Min	24.5 Max

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER	
Actual	0.09	0.19	1.4	0.01	2.4	0.20	5.5	0.01	0.01	0.00	TOT	0.02

ALLOY LIMITS

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER	MAX
7075 MIN	0.00	0.00	1.2	0.00	2.1	0.18	5.1	0.00	0.00	0.00	EACH	0.05
MAX	0.40	0.50	2.0	0.30	2.9	0.28	6.1	0.20	0.05	0.05	TOT	0.15

Aluminum Remainder

TEST NOTES

Metal represented by this test report was immersion
ultrasonically tested from one side and meets the Class A
and Class B requirements of all specifications referenced
on this test report.

CERTIFICATION

KAISER ALUMINUM & CHEMICAL CORPORATION (KAISER) HEREBY CERTIFIES THAT METAL SHIPPED UNDER THIS ORDER WAS MELTED AND MANUFACTURED IN THE U.S.A. AND HAS BEEN INSPECTED, TESTED, AND FOUND IN CONFORMANCE WITH THE REQUIREMENTS OF THE APPLICABLE SPECIFICATIONS AS INDICATED HEREIN. ALL METAL WHICH IS SOLUTION HEAT-TREATED COMPLIES WITH AMS 2772. ANY WARRANTY IS LIMITED TO THAT SHOWN ON KAISER'S STANDARD GENERAL TERMS AND CONDITIONS OF SALE. TEST REPORTS ARE ON FILE, SUBJECT TO EXAMINATION. TEST REPORTS SHALL NOT BE REPRODUCED EXCEPT IN FULL, WITHOUT THE WRITTEN APPROVAL OF KAISER ALUMINUM & CHEMICAL CORPORATION LABORATORY. THE RECORDING OF FALSE, FICTITIOUS, OR FRAUDULANT STATEMENTS OR ENTRIES ON THE CERTIFICATE MAY BE PUNISHED AS A FELONY UNDER FEDERAL LAW. ISO-9001:2000 CERTIFIED

BILL POYNOR, LABORATORIES SUPERVISOR

